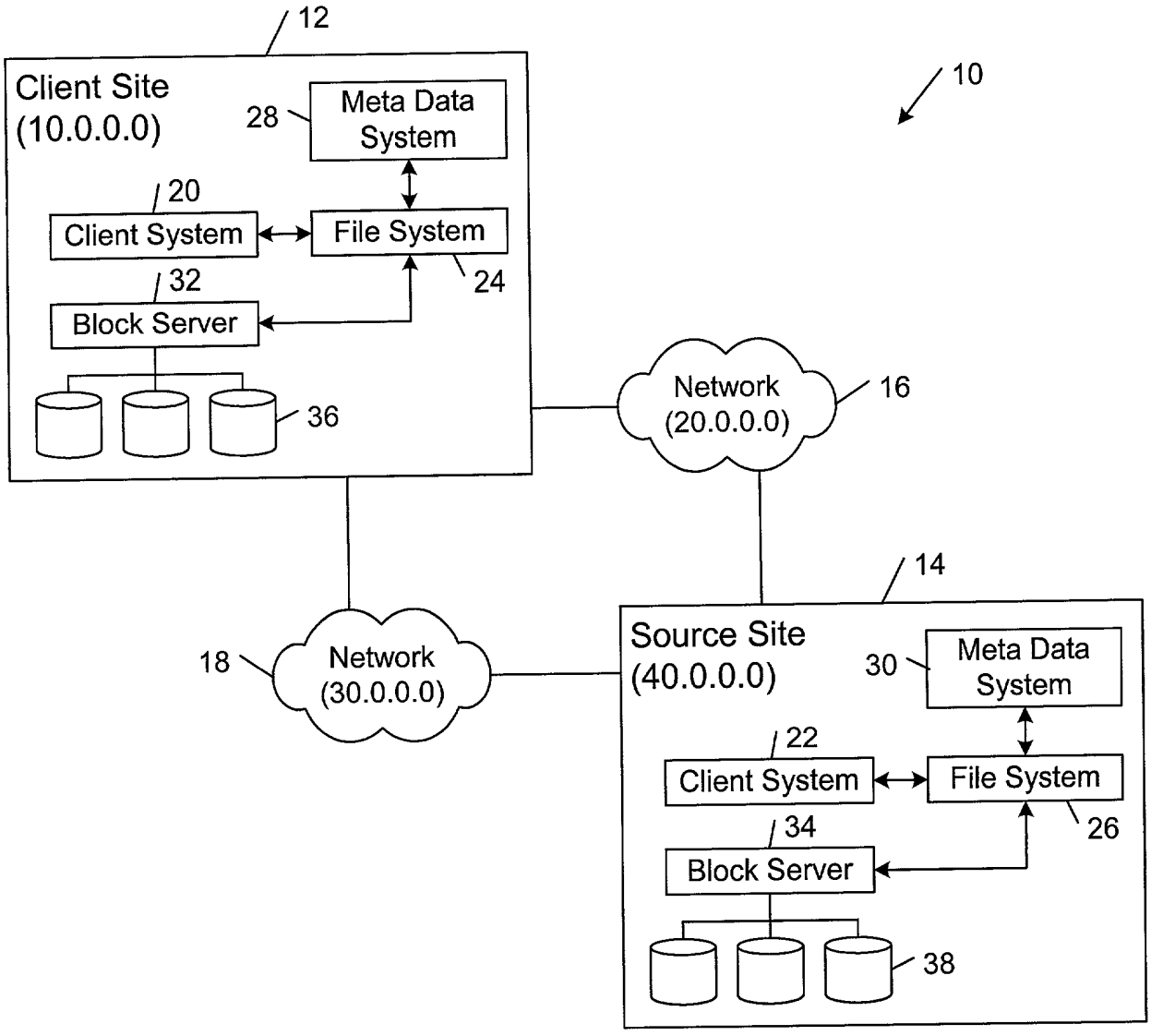
12
Client Site
(10.0.0.0)
28
Meta Data System
20
Client System
File System
24
32
Block Server
36
10
Network
(20.0.0.0)
16
14
18
Network
(30.0.0.0)
Source Site
(40.0.0.0)
30
Meta Data System
22
Client System
File System
26
34
Block Server
38

FIG. 1

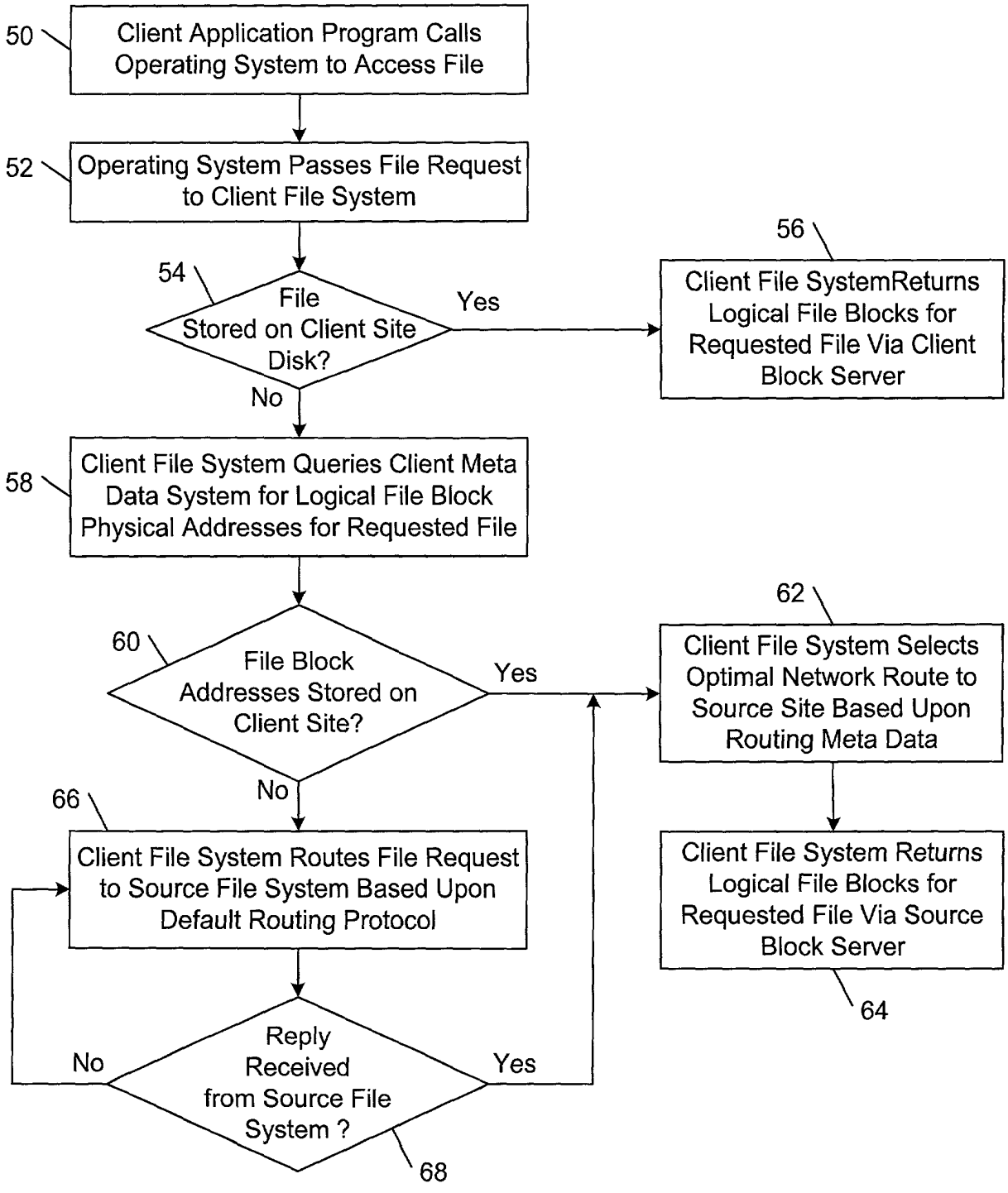
50
Client Application Program Calls Operating System to Access File
52
Operating System Passes File Request to Client File System
54
File Stored on Client Site Disk?
Yes
No
56
Client File SystemReturns Logical File Blocks for Requested File Via Client Block Server
58
Client File System Queries Client Meta Data System for Logical File Block Physical Addresses for Requested File
60
File Block Addresses Stored on Client Site?
Yes
No
62
Client File System Selects Optimal Network Route to Source Site Based Upon Routing Meta Data
64
Client File System Returns Logical File Blocks for Requested File Via Source Block Server
66
Client File System Routes File Request to Source File System Based Upon Default Routing Protocol
68
Reply Received from Source File System ?
No
Yes

FIG. 2

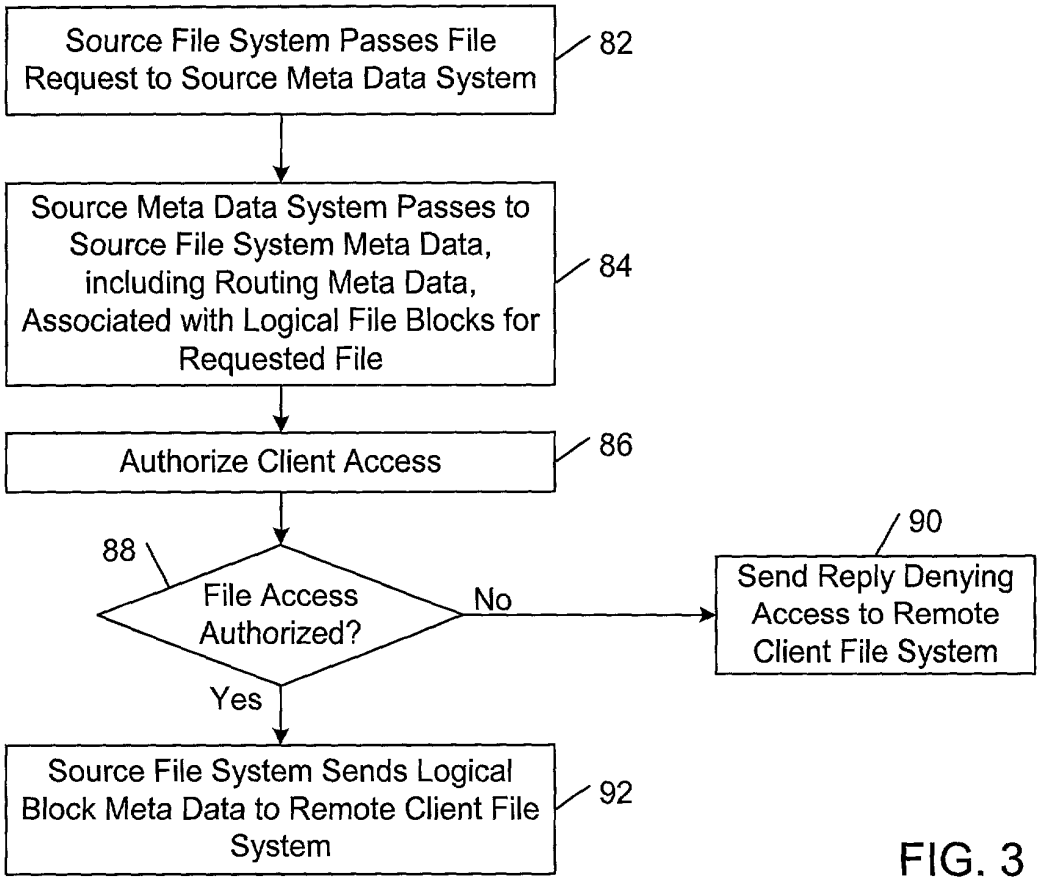
Source File System Passes File Request to Source Meta Data System
82
Source Meta Data System Passes to Source File System Meta Data, including Routing Meta Data, Associated with Logical File Blocks for Requested File
84
Authorize Client Access
86
88
File Access Authorized?
No
90
Send Reply Denying Access to Remote Client File System
Yes
Source File System Sends Logical Block Meta Data to Remote Client File System
92

FIG. 3

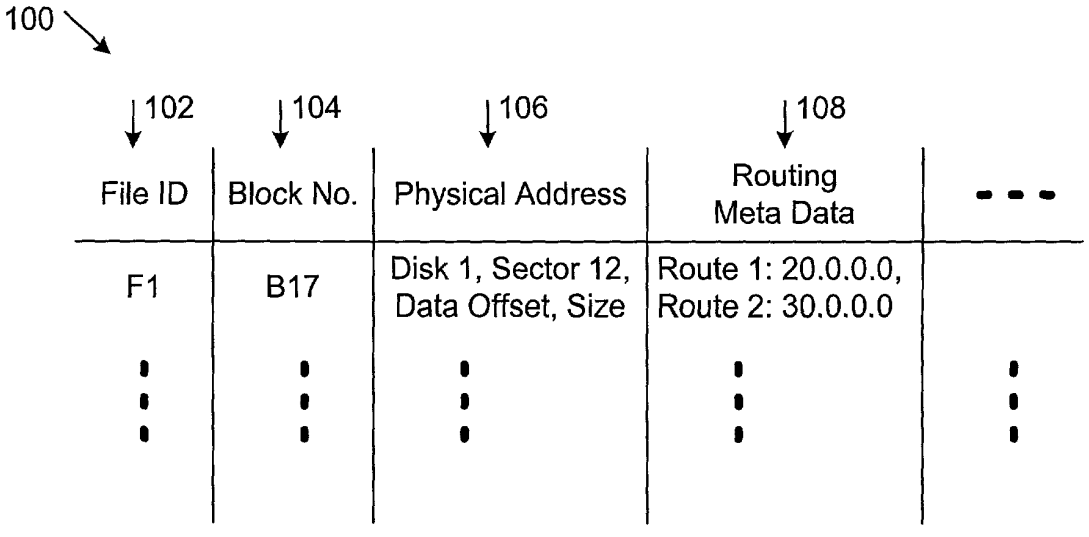
100
102
104
106
108
File ID
Block No.
Physical Address
Routing Meta Data
F1
B17
Disk 1, Sector 12, Data Offset, Size
Route 1: 20.0.0.0, Route 2: 30.0.0.0

FIG. 4